

ABSTRACT

A method of the invention produces a porous film by casting a polymer solution containing a polymer onto a substrate to form a film, and subjecting the film to phase conversion to thereby form a porous film. In the method, the polymer constituting the porous film has a surface tension S_a [mN/m], the substrate has a surface tension S_b [mN/m], and S_a and S_b satisfy the following condition: $S_a - S_b \geq -10$. This method can produce a porous film having a high rate of hole area at its surfaces and having homogenous micropores from the surfaces to the core thereof. A porous film of the invention is a porous film having a large number of continuous micropores. The film has a thickness of 5 to 200 μm , has an average surface pore size A of 0.01 to 10 μm and an average rate of surface hole area C and has an average inside pore size B and an average rate of inside hole area D inside thereof, in which the ratio A/B of A to B is 0.3 to 3, and the ratio C/D of C to D is 0.7 to 1.5.